



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,717	10/17/2005	Frank Schreiber	20797/0204642-US0	6110

7278 7590 04/20/2007
DARBY & DARBY P.C.
P. O. BOX 5257
NEW YORK, NY 10150-5257

EXAMINER

NUR, ABDULLAHI

ART UNIT	PAPER NUMBER
----------	--------------

2877

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/553,717	Applicant(s) SCHREIBER, FRANK	
	Examiner Abdullahi Nur	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/17/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 57 is objected to because of the following informalities: Because of recitation "second detection unit" in line 5, it is believed claim 57 was intended to depend on 31 and has been treated as such for the remainder of this office action. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 52 and 53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Disclosure does not disclose how the shutter is responsive as a function of the amount of light striking the detector.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30,33-37,43-46,50-51, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Engelhardt (US Patent # 5,886,784).

As to claim 30, Engelhardt teaches an apparatus for the spectral selection and detection of spectral regions of a light beam, comprising: a first selection unit 25 including: a first spectral splitting device 27 configured to spectrally split the light beam; and a first light blocking and reflecting device 28 configured to block a first spectral region and reflect at least part of an unblocked second spectral region 30; and a first detection unit 26 including a plurality of first detectors (31,32), at least one of the first detectors being disposed in a first beam path of the blocked second spectral region, at least one of the first detectors being disposed in a second beam path of the reflected first spectral region, each of the first detectors having a respective different detection property or using a respective different detection method (Fig. 3).

As to claim 33, Engelhardt teaches all as applied to claim 30, and in addition teaches plurality of first detectors including at least three detectors (31,32,36) and the first light blocking and reflecting device 28 configured to at least one of block or reflect at least a respective spectral region to each of the at least three detectors (Fig.4).

As to claim 34, Engelhardt teaches all as applied to claim 30, and in addition teaches an apparatus wherein the first light blocking and reflecting device 28 is configured to divide an entire spectrum into a plurality of predefinable fractions (column 3, lines 28-35).

As to claim 35, Engelhardt teaches all as applied to claim 30, and in addition teaches optical filter that provide a neutral spectral division (column 1, lines 23-25; column 2, lines 20-25).

As to claim 36, Engelhardt teaches all as applied to claim 30, and in addition teaches an apparatus wherein the first light blocking and reflecting device is inherently configured to provide a polarization-dependent division.

As to claim 37, Engelhardt teaches all as applied to claim 30, and in addition teaches an apparatus wherein the first light blocking and reflecting device and the plurality of first detectors are disposed in a common module (Fig.4).

As to claim 43, Engelhardt teaches all as applied to claim 30, and in addition teaches an apparatus wherein the first light blocking and reflecting device is configured to spectrally split the light beam into a predefinable ratio (column 3, lines 28-35).

As to claim 44, Engelhardt teaches all as applied to claim 30, and in addition teaches an apparatus wherein the first light blocking and reflecting device includes a mirror slide openable at least partially (column 3, lines 22-23).

As to claim 45, Engelhardt teaches all as applied to claim 30, and in addition teaches an apparatus wherein the first light blocking and reflecting device is disposed in a flat arrangement (Fig.3).

As to claim 46, Engelhardt teaches all as applied to claim 30, and in addition teaches wherein the first light blocking and reflecting device is disposed in a three-dimensional arrangement (column 2, line 62-66).

Art Unit: 2877

As to claim 50, Engelhardt teaches all as applied to claim 30, and in addition teaches an optical device (lens) that can be placed before detector to make of an image of light on it.

As to claim 51, Engelhardt teaches all as applied to claim 50, and in addition teaches an apparatus wherein the optical device includes a prism 27.

As to claim 58, Engelhardt teaches an apparatus comprising: a first selection unit 25 including: a first spectral splitting device 27 configured to spectrally split the light beam; and a first light blocking and reflecting device 28 configured to block a first spectral region and reflect at least part of an unblocked second spectral region; and a first detection unit 26 including a plurality of first detectors (31,32), at least one of the first detectors being disposed in a first beam path of the blocked second spectral region, at least one of the first detectors being disposed in a second beam path of the reflected first spectral region, each of the first detectors having a respective different detection property or using a respective different detection method (Fig.3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhardt in view of Osipchuk et al. (US 2004/0042007 A1).

As to claims 38-40, Engelhardt in view of Osipchuk teaches all as applied to claim 30, except for the photomultiplier, photodiode, and avalanche photo-diode. Osipchuk photomultiplier, photodiode, and avalanche (paragraph 0037, lines 8-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use incorporate the PMT, photodiode and avalanche photodiode as taught by Osipchuk into Engelhardt's in order to provide detectors with various degrees of light sensitivity.

4. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhardt in view of well known prior art.

As to claims 31 and 32, Engelhardt teaches all as applied to claim 30, except a second detection unit. However, note the mere duplication of essential working parts of an apparatus involves only routine skill the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an additional detection unit to further increase the versatility of the apparatus.

Claims 41,42, 47-49 and 57 are being rejected as incorporating the deficiency of claim 31 upon which they depend.

As to claim 54-56, Engelhardt teaches all as applied to claim 30, except the detectors are cooled; use of electrical components. It is notoriously well known to cool detectors;and the use electrical elements.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to cool the detectors in order to achieve high s/n ratio.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use electronics to control and deliver the electricity among the electrical components of the apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullahi Nur whose telephone number is (571) 270-1298. The examiner can normally be reached on Monday - Friday, 8 a.m. to 5p.m. EST.

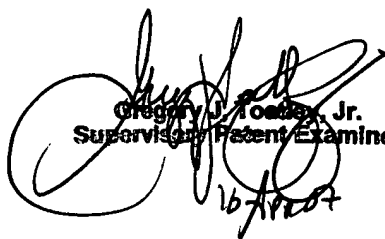
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abdullahi Nur
Patent Examiner
AU 2877

AN


Gregory J. Tooley, Jr.
Supervisor Patent Examiner
16 APR 07